

In the Claims:

1. (original) A rapid prototyping apparatus comprising:
 - a dispenser for controllable dispensing a flowable material which is solidifiable upon being dispensed;
 - a platform for supporting a cross-section of a three-dimensional object and providing a working surface for building a next object cross-section;
 - at least one indexer coupled to the dispenser and to the platform for relatively displacing the dispenser and the working surface in at least two dimensions, comprising a scanning direction and an index direction; and
 - a controller coupled to the indexer and to the dispenser for causing material to be dispensed over the working surface in accordance with a selected style.

Claims 2 - 101 are canceled.

102. (new) An apparatus for forming a three-dimensional object in successive layers from a build material and a support material on a supporting platform in accordance with data defining the object, comprising:
 - a dispenser mounted on the apparatus,
 - a controller mounted on the apparatus and connected to the dispenser for controlling relative movement of the dispenser and the platform, the controller causing the build material to be dispensed according to a build style and the support material to be dispensed according to a support style, the build style specifying and forming the object with supports selected one from the group consisting of checkerboard supports, column supports, arch supports, line supports and combinations thereof;
 - the dispenser having a plurality of orifices extending in a direction angled to a scan direction and being selectively activatable in accord with data supplied to the dispenser relating to the formation of each layer; and

a source of flowable build material and flowable support material connected to the dispenser for selective deposition from the orifices thereof onto the supporting platform, at least the flowable build material further being a radiation-curable material.

103. (new) The apparatus according to claim 102 further comprising means for supplying radiation to cure each layer of selectively-deposited, radiation-curable build material.

104. (new) The apparatus according to claim 102 wherein the flowable build material is a photopolymer.

105. (new) The apparatus according to claim 104 wherein the flowable build material comprises a photoinitiator.

106. (new) The apparatus according to claim 103 wherein the means for supplying radiation further comprises a source of ultraviolet (UV) radiation to cure at least the flowable build material.

107. (new) The apparatus according to claim 102 wherein the selectively deposited flowable build material and support material are deposited on the supporting platform, the dispenser and the platform being operable to move in an angled direction to each other.

108. (new) The apparatus according to claim 102 wherein the dispenser further comprises at least one multi-jet ink jet dispensing head.

109. (new) The apparatus according to claim 102 wherein the column supports are one selected from the group consisting of offset column supports, column supports with shelving, N-

by-N column supports define in terms of drop width, N-by-N column supports defined in terms of pixels and combinations thereof.

110. (new) The apparatus according to claim 102 wherein the checkerboard supports are drop-on/drop-off checkerboard supports.

111. (new) The apparatus according to claim 102 wherein the line supports are one selected from the group consisting of straight-line supports, curved line supports, broken line supports and combinations thereof.

112. (new) The apparatus according to claim 102 wherein the dispenser moves transverse to the scan direction.

113. (new) The apparatus of claim 102 further comprising the support style specifying supports with shelving on at least part of a layer.

114. (new) The apparatus of claim 102 further comprising the controller provides a build style that specifies a higher drop density ratio for down-facing or up facing surfaces than for interior regions of the object.

115. (new) The method of claim 102 wherein the build style specifies forming an interior region of the object with supports selected one from the group consisting of checkerboard supports, column supports, arch supports, line supports and combinations thereof.

116. (new) The apparatus according to claim 112 wherein the controller provides a build style that forms the object through raster scanning.

117. (new) The apparatus according to claim 102 wherein the controller specifies the use of a water soluble material to build supports.